



K-12 Students explore Work and Life in an Arctic Station via H.323

*H. Pfeiffenberger, C. Müller, M. Wolff
Alfred Wegener Institute,
Bremerhaven, Germany
and Ny Alesund, Spitsbergen*

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H.Pfeiffenberger, Cl. Müller, M. Wolff et al.

1
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Introduction



- *The panel introduced the almost limitless possibilities of Internet2...*
- *We stretched some classical technologies and connected them to Internet2...*
- *What we did*
- *How we did it*
- *Why we did it*
- *A live sample (hopefully - or some video)*

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2
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What: Connect scientists at remote sites to students “at home”



- AWI has permanent stations in Antarctica and on Spitsbergen, inhabited by at least 9 or 2 persons - respectively - in winter
- First of all, they have to survive (do house-keeping)
- Then, they study the atmosphere, ice and animals
- We connected them via videoconference to high school students, visitors of museums and a studio at the World EXPO at Hannover
- Thus, we enabled conversations about work and life at the stations: “What, why and How”

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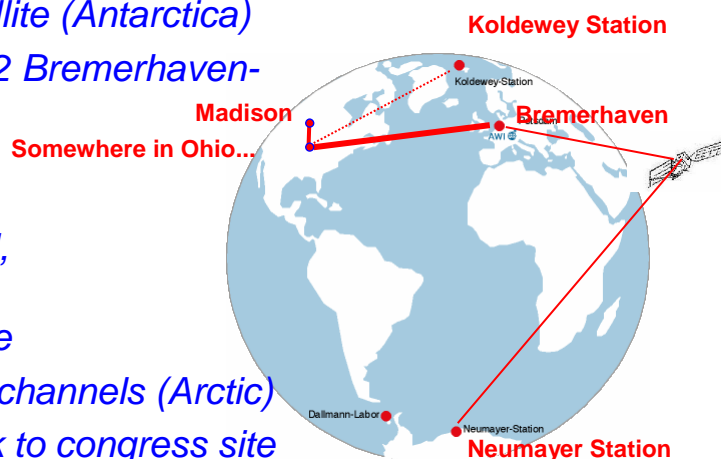
3
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From ISDN to Internet2



- Leased line @ 384 kBit/s via satellite (Antarctica)
- Internet2 Bremerhaven-Ohio
- G-WiN,
- Dante,
- Abilene
- 6 ISDN channels (Arctic)
- DSL link to congress site



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4
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Why (and who)?



- Interest in the sciences has been declining for some years...
- AWI has interesting and important topics as well as exotic locations to offer
- Thus, Public Relations and IT departments made a team to stage events designed to raise interest
- ...among all age groups, but especially among children and students



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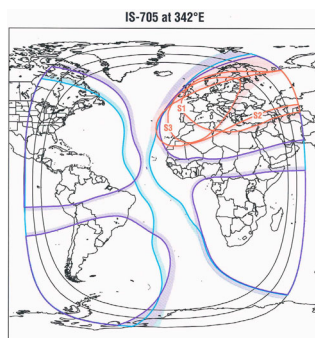
5
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Antarctic Internet



- In 2000, with the help of a sponsor, bandwidth between Bremerhaven and Antarctica was raised to 384 kBit/s - which is enough for good H.323



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6
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Examples - Munich



- Munich, Nov 2000, at the Technical Museum



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7
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Ex. - Megaconference II



- As seen from Neumayer station, Antarctica
- Two students question a geophysicist 10 meters below the ice surface
- Seen at 140 places around the world, Oct 2000



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8
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Going live...



- - hopefully at least: ISDN lines from Spitsbergen to the mainland broke down this week...



- Else, we will see some video collected during the first test of satellite link and H.323 systems, Antarctica, June 2000

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9
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Conclusions



- To have a conversation with scientists and technicians “on site” proved to have a much higher impact - fascination even - on visitors (!!)
- speaking to them “after the fact” or
- speaking to them over telephone
- There was no hesitation to use this technology - the least with children of kindergarten age - even when there are artifacts like seconds of delay between question and answer
- We hope to have inspired more curiosity and interest in science at least in some of our guests

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